

Appl. No. 10/531,287
Amendment dated March 21, 2006
Reply to Office Action of September 21, 2006

TAM-103
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Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Currently Amended) A compiler comprising:

a conversion program,

wherein the conversion program can convert first program descriptions described by diverting a predetermined program language into circuit descriptions,

the first program descriptions contain register assignment statements with particular operators and clock boundary descriptions, and which permit circuit operations to be specified at a cycle precision, and

the circuit descriptions specify hardware realizing the circuit operations specified by the first program descriptions in a predetermined hardware description language, and

the register assignment statements function to allocate a variable of the left-hand side to a register, and need one clock for assignment from the right-hand side to the left-hand side.

2. (Currently Amended) A compiler comprising:

a conversion program,

wherein the conversion program can convert first program descriptions described by diverting a predetermined program language can be converted into second program descriptions using a predetermined program language,

Appl. No. 10/531,287
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TAM-103

the first program descriptions contain register assignment statements with particular operators and clock boundary descriptions, and which permit circuit operations to be specified at a cycle precision, ~~and~~

the second program descriptions contain transformed assignment statements into which the register assignment statements are transformed in order to make states of preceding cycles referable, and register assignment description insertion statements which associate variables of the transformed assignment statements with changes of registers attendant upon cycle changes, in correspondence with the clock boundary descriptions, and

the register assignment statements function to allocate a variable of the left-hand side to a register, and need one clock for assignment from the right-hand side to the left-hand side.

3. (Currently Amended) A compiler comprising:

a conversion program,

wherein the conversion program can convert first program descriptions described by diverting a predetermined program language into second program descriptions using a predetermined program language and circuit descriptions,

the first program descriptions contain register assignment statements with particular operators and clock boundary descriptions, and which permit circuit operations to be specified at a cycle precision,

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TAM-103

the second program descriptions contain transformed assignment statements into which the register assignment statements are transformed in order to make states of preceding cycles referable, and register assignment description insertion statements which associate variables of the transformed assignment statements with changes of registers attendant upon cycle changes, in correspondence with the clock boundary descriptions, ~~and~~

the circuit descriptions specify hardware which is defined by the second program descriptions, in a predetermined hardware description language, and

the register assignment statements function to allocate a variable of the left-hand side to a register, and need one clock for assignment from the right-hand side to the left-hand side.

4. (Original) The compiler of claim 1, wherein the predetermined program language is a C language.

5. (Original) The compiler of claim 1, wherein the hardware description language is a description language of RTL level.

6. - 20. (Canceled)